Attachment C – Enterprise Modeling Tools

Enterprise Modeling Tools

Recommendations and Selection Criteria

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1.   Introduction

The Health Care Financing Administration (HCFA) is improving the effectiveness of its decision-making processes regarding its information technology investments and infrastructure, and is improving the efficiency and effectiveness of its software development processes. The use of enterprise modeling tools is an effective method of improving these processes. Toward that end, HCFA, in Deliverable 6 of its Systems Integration for Target Infrastructure Development – Task 3 Task Order, asked for delivery of "recommendations for approaches and tools, where appropriate, regarding business function modeling and high-level integrated enterprise modeling." The requirements for this deliverable were defined and expanded in meetings with HCFA personnel and the HCFA Task Manager.

The expanded Deliverable 6 requirements call for:

- an inventory of current HCFA enterprise tools,

- an evaluation of the current tools' suitability,

- the development of enterprise modeling tool selection criteria,

- the development of recommendations for further review and action by HCFA,

- a list of contact information for all tools reviewed, and

- a high-level framework describing the context for the use and support of enterprise modeling tools.

This document fulfills the requirements of the expanded Deliverable 6 definition.

2.   Background

An enterprise is perceived by the world (which includes its employees) through the actions and products of its employees and its software applications. Employee actions are driven by their mental picture of the organization – their "enterprise model." Sadly, it is common in large organizations to have significant and costly differences between the employees' mental model (which reflect the real world they operate in) and the implementation of business processes in the software applications. Recognition of this fact is part of the motivation for the development of Information Technology Architectures that link business strategy and direction with information technology development.

Enterprise modeling provides the mechanism for reducing the incongruence between the employees' mental model and the implementation of business processes in software applications. Enterprise modeling helps provide the following:

- system objectives aligned with business objectives;

- rapid deployment of applications in respond to business needs;

- public models guiding application development and acquisition;

- use of models instead of code to assess, evaluate, and maintain existing applications; and

- an architectural framework allowing the reuse, revision, and deployment of common business objects in multiple systems across the enterprise.

The key requirements of an enterprise modeling tool can be segmented into the following categories:

- Business Modeling,

- Engineering,

- Development, and

- Operations.

Business modeling begins with the development of clear and explicit models of the enterprise's business concepts, processes, and objects. The essential focus of business modeling is answering and modeling the questions *who*, *what*, *when*, *where*, *why*, and *how*. The models developed in response to these questions will guide process improvements and systems development. These models provide the links between the business and the information technology.

Engineering covers the planning, analysis, and design necessary to conceptualize software applications.

Development is concerned with the functionality required for the effective generation of quality applications.

Operations focuses on the execution of generated applications in production environments.

An enterprise modeling tool taxonomy, giving more detail as to the requirements of each category, is provided in Appendix A. The Enterprise Modeling Tool Selection Criteria Framework (Appendix B) provides further detailed requirements for each category.

The ideal solution for HCFA would be the selection and implementation of a single enterprise modeling tool that integrates business modeling with system design and implementation — the concept-to-code solution. Unfortunately, regardless of the hype in the marketing literature, true concept-to-code solutions do not exist in a single tool or tightly integrated tool set. However, technology, analysis and design methods, and allied fields such as business process reengineering, are developing, bringing the concept-to-code solution closer to a reality. In Section 0 of this report, a number of enterprise modeling tools and tool suites that approach the concept-to-code solution are identified for further investigation by HCFA.

3. Current Tool Inventory and Suitability

The first step in any improvement process is the development of a baseline. This section contains an inventory of the enterprise modeling tools currently in use at HCFA. The inventory is based on discussions with HCFA personnel and written material.[1] Only those tools that were deemed by HCFA as approved enterprise tools were included in the inventory. Tools in use for demonstration or pilot projects were not considered. Examples of such tools include SES Strategizer and Forte. The current tool inventory is shown in Table 1.

TABLE 1. ENTERPRISE TOOLS IN CURRENT USE

Vendor	Tool
Platinum Technology, Inc.	Repository
Platinum Technology, Inc.	ERwin
Micro Focus Ltd.	COBOL Workbench
Computer Associates, Inc.	ENDEVOR
Quality Systems & Software Ltd.	DOORS (Dynamic Object Oriented Requirements System)
Microsoft	MS Project
Primavera Systems, Inc.	Primavera

The current tool inventory was applied to the enterprise modeling tool taxonomy (see Appendix A) to determine the gaps in HCFA's coverage of enterprise modeling tool functionality. The tool gaps are shown in Figure 1.

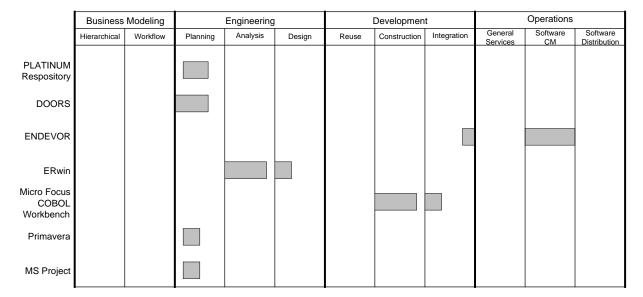[1] HCFA/OIS/IPMG(ITA Project), "An Investigation of Enterprise Applications Development Modeling Tools," June 1998.

FIGURE 1. CURRENT TOOL FUNCTIONALITY

	Business Modeling		Engineering			Development			Operations		
	Hierarchical	Workflow	Planning	Analysis	Design	Reuse	Construction	Integration	General Services	Software CM	Software Distribution
PLATINUM Respository			▪								
DOORS			▪								
ENDEVOR								▪		▪	
ERwin				▪	▪						
Micro Focus COBOL Workbench							▪	▪			
Primavera			▪								
MS Project			▪								

While HCFA's tools do not cover the complete enterprise tool spectrum, they are quite capable and are, or are near, the "best in class" within their respective categories. HCFA is currently using tools in pilot projects that offer increased coverage of the enterprise tool spectrum (e.g., SES Strategizer, Forte). However, to obtain the increased functionality delivered by some of these tools, HCFA would have to make a commitment to the object-oriented software development paradigm – a major change in thought patterns, as well as execution.

4. Enterprise Modeling Tool Selection Criteria

The Enterprise Modeling Tool Selection Criteria Framework provided in this report gives HCFA a tool that will allow the Agency to effectively fill the gaps it has in enterprise modeling tool functionality. The framework may be used to select an enterprise modeling tool that attempts to cover the complete spectrum of functionality, or to select a tool that covers just one or more categories or subcategories. As presented, the framework is set up for the selection of a complete enterprise modeling tool.

An outline of the Enterprise Modeling Tool Selection Criteria Framework is presented in Table 2. The complete framework is provided in Appendix B. The framework contains the requirements and criteria that HCFA should consider when acquiring an enterprise modeling tool or component. The framework contains the categories of the Enterprise Modeling Tool Taxonomy (see Appendix A) plus the additional categories of Business Issues and Architecture.

The Business Issues category focuses on criteria that extend beyond the traditional technical issues, but are critical for the success of an enterprise modeling tool implementation. These issues are business direction, costs, training, and experience. Architecture concerns the underlying structure, flexibility, and longevity of the enterprise modeling tool and the applications generated by the tool.

The selection criteria and requirements are presented as a framework so that HCFA can change and adapt the framework as it deems necessary. Within the framework, each category (level 1), subcategory (level 2), and requirement (level 3) has been given weights that represent the relative "importance" of the item to the totality of enterprise modeling tool functionality. The outline in Table 2 contains only the framework categories and subcategories. It is recommended that HCFA review the complete framework in Appendix B and verify that the weights shown represent the Agency's view of each item's relative importance, and that the framework contains those issues that HCFA considers important to its operation. Weights are easily changed and additional items can be easily added; deletions can be handled by reducing an item's weight to zero. The use of a zero weight, as opposed to removing an item from the framework, is recommended because the item might become important in the future.

TABLE 2. ENTERPRISE MODELING TOOL SELECTION CRITERIA OUTLINE

Category Description	Weight
BUSINESS ISSUES	**58**
1. Direction	*24*
2. Cost	*18*
3. Training	*16*
ARCHITECTURE	**91**
4. Standards Compliance	*25*
5. Environments	*41*
6. Application Topologies	*25*
BUSINESS MODELING	**53**
7. Hierarchical Modeling	*35*
8. Workflow Modeling	*18*
ENGINEERING	**107**
9. Planning	*37*
10. Analysis	*48*
11. Design	*22*
DEVELOPMENT	**112**
12. Reuse	*32*
13. Construction	*46*
14. Integration	*34*
OPERATIONS	**79**
15. General Services	*38*
16. Software Configuration Management	*24*
17. Software Distribution	*17*
Total	**500**

5. Recommendations for Further Action

Although there are no enterprise modeling tools that provide full functionality, several tools or tool suites come close. Table 3 below contains the names of vendors that have tools or tool suites that are recommended for further investigation by HCFA. Appendix C lists the tools and provides remarks about the tools' functionality. Contact information is provided in Appendix D. Only tools or tool suites that provided some functionality in all categories of the enterprise modeling tool taxonomy were considered for mention. There are many excellent tools that have functionality covering only some of the categories. There are also tools that may cover significant portions of the enterprise modeling tool taxonomy, but adoption of such tools would require HCFA to move to a radically new development environment. These types of tools were not included in Table 3 or Appendix C.

It is recommended that HCFA clearly and fully define its enterprise modeling tool requirements before acquiring any tool. This will require HCFA to define the analysis, design, and programming environment it wishes to implement in the future, since many of the tools favor, or are designed to implement, certain strategies, such as object-oriented analysis, design and programming.

TABLE 3. RECOMMENDED VENDORS FOR ENTERPRISE MODELING TOOLS

Vendor Name
Aonix
Cayenne Software, Inc.
Forte Software, Inc.
Dynasty Technologies, Inc.
Knowledge Based Systems, Inc.
Oracle Corporation
Platinum Technology, Inc.
Popkin Software & Systems Inc.
Proforma Corporation
Ptech, Inc.
Select Software Tools, Inc.
Sterling Software
Visible Systems Corporations

6.   Enterprise Modeling Tools – Context and Use

This section provides some context for the use of enterprise modeling tools.

There is a great deal of current interest and activity concerning the development and maintenance of Enterprise Architectures (EAs) or Information Technology Architectures (ITAs)[2].

For U.S. Government agencies, an Enterprise Architecture is defined as "the explicit description of the current and desired relationships among business and management process and information technology. It describes the 'target' situation which the agency wishes to create and maintain by managing its IT portfolio." [3]

Within the same document, an ITA is defined as "the documentation of the relationships among business and management processes and information technology that ensure:

- alignment of the requirements for agency-sponsored information systems (as defined in OMB Circular A-130) with the processes that support the agency's missions and goals;

- adequate interoperability, redundancy, and security of information systems; and,

- the application and maintenance of a collection of standards by which the agency evaluates and acquires new systems."

A clear theme that emerges from the above statements is that IT applications must be linked to the agency's business. This is a universal theme, and is just as valid for commercial organizations.

The question of how to link the business with IT in an effective and cost-efficient way can be answered with the use of enterprise modeling tools.

Enterprise modeling tools will:

- model the enterprise, allowing the linking of business needs with applications;

- increase the efficiency, effectiveness, and quality of applications; and

- reduce costs for the development and maintenance of IT.

Without the use of enterprise modeling tools, it is unlikely that business needs can be linked to applications with any efficiency or effectiveness. Things change. Without automated tools to help track, manage, and implement responses to change, the business-to-application links that may have existed at one time quickly become obsolete and useless. Application development begins to rely more on the experience and perceptions of the developers, rather than the needs of the business. In the best-case scenario, the IT developers are very knowledgeable of the business and their perceptions are close to the real business needs. The worst case is too horrible to contemplate, but consider this: without the business linkage, a great deal of money, time, and resources could be spent on IT applications and systems that are of no use to the organization.

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[2] Although they can be defined as different architectures, the terms 'Enterprise Architecture" and "Information Technology Architecture" are commonly used interchangeably.
[3] OMB, Franklin D. Raines Memorandum, 18 June 1997.

Effective and disciplined use of enterprise modeling tools will prevent a loss of focus and direction.

The spectrum of enterprise modeling tool (EMT) functionality can be partitioned into four broad categories: business modeling, engineering, development, and operations.

Business modeling tools are used to define the enterprise, its strategic direction, and its functions and processes. This is a critical first step, as everything that follows depends upon the fidelity of the business definitions. Hierarchical and workflow modeling fall into this category.

Engineering tools provide the conceptualization of IT applications to support the business definition. Planning, analysis, and design functions are performed. The linkage of the emerging IT applications to the business is critical. The use of a repository accessible by all EMT components is the usual method of achieving this linkage. Requirements and repository management; estimation and simulation; and process, object, and data modeling are some of the functions that are supported by tools in this category.

Development tools support the generation of the applications. These tools provide facilities for reuse, constructions, and integration. Reuse libraries, debuggers, application and DBMS generation, GUI builders, testing, software configuration management, and team development support are all functions that are part of development. Some functions, such as reverse engineering and roundtrip engineering, span the engineering and development categories.

Operations tools support the execution of generated applications in the production environments. Documentation, performance monitoring, release configuration management, migration, security, and software distribution are some of the functions performed.

Please consult the Enterprise Modeling Tool Taxonomy in Appendix A for a more complete description of the EMT categories.

Please note that the above description of categories is conceptual. In actuality, it may not be possible to separate EMTs or their components into these categories. Tools may provide functionality that crosses between categories, or they may provide limited functionality in several categories.

Appendix A – Enterprise Modeling Tool Taxonomy

1. **Business Modeling**
  1.1. *Hierarchical Modeling*
      1.1.1. Goals/Objectives
      1.1.2. Organizations
      1.1.3. Functions/Processes
      1.1.4. Locations
  1.2. *Workflow Modeling*
      1.2.1. Workflow Specification
      1.2.2. Simulation (Costs and Timing)

2. **Engineering**
  2.1. *Planning*
      2.1.1. High-level Requirements
      2.1.2. Repository Support - Basic
      2.1.3. Repository Support – Extensibility/Customizable
      2.1.4. Estimation Support
      2.1.5. System/Network Simulation Support
  2.2. *Analysis*
      2.2.1. Logical Data/Object Modeling
      2.2.2. Process Modeling (See Business Modeling also)
      2.2.3. Event Modeling
      2.2.4. Model Management
      2.2.5. Requirements Gathering
      2.2.6. Reverse Engineering
  2.3. *Design*
      2.3.1. Physical Data Definition
      2.3.2. Application Specifications
      2.3.3. Prototyping and Simulation Support

3. **Development**
  3.1. *Reuse*
      3.1.1. Search Mechanism
      3.1.2. Reuse Libraries
  3.2. *Construction*
      3.2.1. Debugger Support
      3.2.2. Application Generation
      3.2.3. DBMS Specific Generation Capabilities
      3.2.4. GUI Builder
      3.2.5. Metrics
  3.3. *Integration*
      3.3.1. Team Development Support
      3.3.2. Import/Export Across Environment
      3.3.3. Automated Testing

3.3.4. Software Configuration Management (single release)

4.   Operations
4.1.   General Services
4.1.1. Documentation
4.1.2. Performance Monitoring
4.1.3. Business Continuity
4.2.   Software Configuration Management
4.2.1. Version Control Across Multiple Release Levels
4.2.2. Migration
4.2.3. Security
4.3.   Software Distribution
4.3.1. Environment Definition
4.3.2. Automated Distribution

Appendix B – Enterprise Modeling Tool Section Criteria Framework

TABLE B-1. ENTERPRISE MODELING TOOL SECTION CRITERIA FRAMEWORK – CATEGORIES AND WEIGHTS

Category Description	Requirements	Weight Level 1	Weight Level 2	Weight Level 3
BUSINESS ISSUES		**58**		
1. Direction			*24*	
	Vendor Stability			7
	Technical Vision			9
	Product Support			8
2. Cost			*18*	
	Pricing Agreements			9
	Run times & other costs			9
3. Training			*16*	
	Easy to use			9
	Education			7
ARCHITECTURE		**91**		
4. Standards Compliance			*25*	
	Industry Standards (must be native support)			8
	Open API - (published or shared APIs)			10
	Databases (Version numbers?)			7
5. Environments			*41*	
	Target Platforms			9
	GUI Support (Target Application)			9
	Development Platforms			7
	Application Interoperability			8
	Tool Interoperability			8
6. Application Topologies			*25*	
	Multi-tiered Application Deployment			10
	Application Partitioning			9
	Asynchronous Messaging			6
BUSINESS MODELING		**53**		
7. Hierarchical Modeling			*35*	
	Goal/Objectives Models			10
	Organization Models			8

Category Description	Requirements	Weight Level 1	Weight Level 2	Weight Level 3
	Function/Process Models			10
	Location Models			7
8. Workflow Modeling			*18*	
	Workflow Specification			9
	Simulation			9
ENGINEERING		107		
9. Planning			*37*	
	High-Level requirements			6
	Repository support – Basic			10
	Repository support – Additional			9
	Estimation			5
	System/Network Simulation			7
10. Analysis			*48*	
	Data/Object Modeling			9
	Process Modeling			7
	Event Modeling			8
	Model Management			8
	Requirements Gathering			8
	Reverse Engineering			8
11. Design			*22*	
	Physical Data Definition			9
	Application Specifications			7
	Prototyping and Simulation			6
DEVELOPMENT		112		
12. Reuse			*32*	
	Search Mechanism for Reuse			8
	Supplied reusable libraries			8
	Extensibility of supplied reusable libraries			10
	Third Party Extensions			6
13. Construction			*46*	
	Object Oriented Characteristics (supported in the development environment)			9
	Debugger support			8
	Application Generation			8
	Generation capabilities (DBMS specific)			7
	GUI Builder			9
	Metrics			5
14. Integration			*34*	
	Team Development Support			10
	Import/Export			7

Category Description	Requirements	Weight Level 1	Weight Level 2	Weight Level 3
	Automated Testing			8
	Software Configuration Management - within a single release			9
OPERATIONS		**79**		
15. General Services			*38*	
	Documentation			6
	Query and reporting			9
	Performance monitoring			8
	Business continuity			9
	Security			6
16. Software Configuration Management			*24*	
	Version Control - across multiple release levels			8
	Migration			9
	Security - at release level			7
17. Software Distribution			*17*	
	Environment definition			7
	Automated deployment			10
Total		**500**	*500*	500

Table B - 2. Enterprise Modeling Tool Selection Criteria Framework

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Product Name & Release must be entered in the 'Product Comments' column			Product Name & Release:		
	See Notes at end of table for scoring instructions					
INFORMATIONAL	Company Headquarters			City, State:		
	Business Address			Address:		
	Phone			Phone:		
	Web Page			http://_____		
	Privately owned, or Public corporation			Stock exchange: Stock symbol: Equity partners:		
	Evaluation/Free software					
	Evaluation copies/free copies available via download?			Yes_____ No_____		
	Does it expire?			Yes_____ No_____		
	Limits functionality?			Yes_____ No_____		
	Unlimited internal training use?			Yes_____ No_____		
	Support available for evaluation?			Yes_____ No_____		
BUSINESS ISSUES						
1. Direction	**Vendor Stability**					
	Number of years in business	3		10+yrs=5, 5+yrs=3, 1+ =1		
	Number of customer sites licensed	3		1000=5, 500+ =3, 100+ =1		
	Number of product licenses active	3		10,000=5/5,000=3/1,000=1		
	Documented customer success stories	5		Yes=5/No=0		
	Is vendor profitable?	5		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Current commercial release level	3		3.0+ Releases=5/ 2.0=3/One=1		
	Product is a Defacto standard based on market share of related class of tools	3		>50% of market=5, 25%-50% =3, 10%-24% =1, <10% =0		
	Score	**7**				
	Technical Vision					
	Technical vision aligned with Industry Direction	5		Yes=5/No=0		
	Technical vision aligned with E-Commerce, Web-enablement technologies	5		Yes=5/No=0		
	Technical vision aligned with HCFA strategy (3-year planning horizon)	5		Yes=5/No=0		
	Score	**9**				
	Product Support					
	Technical support available from vendor	5		7x24=5/8x5=3/Outside Source=1		
	Priority technical support available from vendor	5		Yes=5/No=0		
	Consulting services available from vendor	3		Yes=5/Special Request Only=1/No=0		
	Electronic access to vendor software/services	3		Yes=5/No=0		
	Score	**8**				
2. Cost	**Pricing Agreements**					
	GSA Schedule licensing agreement	5		Yes=5/No=0		
	Software cost compared to other products in same class	5		<33% Average =5/Between 33% - 66% =3/>66% Average =1		
	Annual maintenance fees compared to other products in same class	3		<33% Average =5/Between 33% - 66% =3/ >66% Average =1		
	Support cost in addition to annual maintenance fees	3		Yes=5/No=0		
	Amount of on-site consulting expertise required	5		Low=5/Medium=3/High=1		
	Score	**9**				
	Run times & other costs					
	Run time fees required	5		Yes=0/No=5		
	Run time fees price per seat (for 100 users) compared to other products in same class	5		<33% Average =5/Between 33% - 66% =3/>66% Average =1		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Resource consumption of application on client	3		Low=5/Medium=3/High=1		
	Score	**9**				
3. Training	**Easy to use**					
	Ease of navigation within the tool	5		Good=5/Adequate=3/Poor=1		
	Installed without vendor assistance	1		Yes=5/No=0		
	GUI possess the native look and feel for each target platform	3		Yes=5/No=0		
	Accurate documentation for product	5		Good=5/Adequate=3/Poor=1		
	Comprehensive tutorial -good overall introduction	3		Good=5/Adequate=3/Poor=1		
	Online documentation available	5		Yes=5/No=0		
	Score	**9**				
	Education					
	Vendor provides formal education for product	5		Yes=5/No=0		
	Courseware is available for purchase	1		Yes=5/No=0		
	Score	**7**				
ARCHITECTURE						
4. Standards Compliance	**Industry Standards (must be native support)**					
	Supports OLE, COM, DCOM, ActiveX	5		All=5/No=0		
	Supports HTML	5		Yes=5/No=0		
	Supports DCE	5		Yes=5/No=0		
	Supports ODBC	0		Yes=5/No=0		
	Supports CORBA	0		Yes=5/No=0		
	Supports PCTE (Portable Common Tools Environment - see Repository section)	5		Yes=5/No=0		
	Supports CDIF (Case Data Interchange Facility - see Integration section)	5		Yes=5/No=0		
	Score	**8**				
	Open API - (published or shared APIs)					
	API provided to support repository integration	5		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Bi-directional tool integration (between analysis/design/construction, testing tools)	5		Yes=5/No=0		
	Number of TP Monitors supported (natively)	5		>Two=5/Two=3/One=1		
	Score	**10**				
	Databases					
	Oracle Release 7 or 8	5		Both Versions = 5/ Version 7 or 8 =3/ No=0		
	Sybase	1		Yes=5/No=0		
	Informix	1		Yes=5/No=0		
	Ingres	1		Yes=5/No=0		
	DB2 (client/server)	5		Yes=5/No=0		
	MS SQL/Server	5		Yes=5/No=0		
	MS Access	3		Yes=5/No=0		
	Model 204	3		Yes=5/No=0		
	OO Databases	1		Yes=5/No=0		
	VSAM	3		Yes=5/No=0		
	Other Databases, or File Systems	0		Yes=5/No=0		
	Score	**7**				
5. Environments	**Target Platforms**					
	MS Windows Release 3.1 or 3.11	3		Yes=5/No=0		
	MS Windows 95 or 98	5		Yes=5/No=0		
	MS Windows NT Release 3.51 or 4.0	5		Both NT 3.51, 4.0 = 5/NT 3.51 or NT 4.0 =3/None = 0		
	UNIX	5		Yes=5/No=0		
	Sun OS	1		Yes=5/No=0		
	Sun Solaris	1		Yes=5/No=0		
	MVS	5		Yes=5/No=0		
	Apple Macintosh	1		Yes=5/No=0		
	OS/2	0		Yes=5/No=0		
	Other	0		Yes=5/No=0		
	Score	**9**				

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	GUI Support (Target Application)					
	MS Windows Release 3.1 or 3.11	3		Yes=5/No=0		
	MS Windows 95 or 98	5		Yes=5/No=0		
	MS Windows NT Release 3.51 or 4.0	5		Both NT 3.51, 4.0 = 5/NT 3.51 or NT 4.0 =3/None = 0		
	Motif	3		Yes=5/No=0		
	X/Windows	3		Yes=5/No=0		
	MVS 3270 Presentation	3		Yes=5/No=0		
	Macintosh	1		Yes=5/No=0		
	Presentation Manager	0		Yes=5/No=0		
	Score	**9**				
	Development Platforms					
	MS Windows Release 3.1 or 3.11	3		Yes=5/No=0		
	MS Windows 95 or 98	5		Yes=5/No=0		
	MS Windows NT Release 3.51 or 4.0	5		Both NT 3.51, 4.0 = 5/NT 3.51 or NT 4.0 =3/None = 0		
	UNIX	3		Yes=5/No=0		
	Sun OS	0		Yes=5/No=0		
	Sun Solaris	3		Yes=5/No=0		
	MVS	1		Yes=5/No=0		
	Apple Macintosh	0		Yes=5/No=0		
	OS/2	0		Yes=5/No=0		
	Other	1		Yes=5/No=0		
	Score	**7**				
	Application Interoperability					
	Developed applications integrate with desktop applications	5		Good=5/Adequate=3/Poor=1/No=0		
	Developed applications can invoke other applications (including the mainframe, natively)	5		Yes=5/No=0		
	Developed applications can be invoked by other applications	5		Yes=5/No=0		
	Developed applications can access data on the mainframe (natively)	5		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Ability to submit batch updates within the target environment through a batch API, or other capability	5		Yes=5/No=0		
	Score	**8**				
	Tool Interoperability					
	Tool(s) interoperate/integrate with Platinum Repository	5		Yes=5/No=0		
	Tool(s) interoperate/integrate with QSS' DOORS	5		Yes=5/No=0		
	Tool(s) interoperate/integrate with CAI's ENDEVOR	5		Yes=5/No=0		
	Tool(s) interoperate/integrate with Primavera	5		Yes=5/No=0		
	Tool(s) interoperate/integrate with MS Project	5		Yes=5/No=0		
	Tool(s) interoperate/integrate with Erwin	5		Yes=5/No=0		
	Tool(s) interoperate/integrate with Micro Focus COBOL	3		Yes=5/No=0		
	Tool(s) interoperate/integrate with MS Repository	3		Yes=5/No=0		
	Score	**8**				
6. Application Topologies	**Multi-tiered Application Deployment**					
	Deploys two-tier applications	5		Yes=5/No=0		
	Deploys multi-tier(>2 tier) applications (natively)	5		Yes=5/No=0		
	Seamless integration with TP Monitor (3rd Party or natively)	3		Yes=5/No=0		
	Score	**10**				
	Application Partitioning					
	Application logic partitionable between client & server (split at lower level)	5		Yes=5/No=0		
	Can logic be moved between the client & server?	5		Yes=5/No=0		
	Ease of use for the partitioning feature - Import/Export views must be synchronized after a change	3		High=5/Medium=3/Low=1		
	Partitioning options available	3		Dynamic=5/Static=3/No=0		
	Score	**9**				
	Asynchronous Messaging					
	Supports Asynchronous Messaging in Applications	5		Yes=5/No=0		
	Score	**6**				

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
BUSINESS MODELING						
7. Hierarchical Modeling	**Goal/Objectives Models**					
	Goal model showing the business goals of the organization	5		Yes=5/No=0		
	Links objectives (sub-goals) to business goals	5		Yes=5/No=0		
	Goal/Objective Model linked to other business models	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**10**				
	Organization Models					
	Documents top level organization hierarchy and roles	5		Yes=5/No=0		
	Documents multiple levels of organization hierarchy	5		Yes=5/No=0		
	Links to other business models	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Function/Process Models					
	Documents the decomposition of the business domain into multiple levels (e.g. Functional Area, Function, Process, Activity)	5		4 levels=5/3 levels=3/2 levels=1/<2 levels = 0		
	Documents information requirements and use at the lowest level (e.g. Activity)	5		Yes=5/No=0		
	Documents data entities and use at the lowest level	5		Good=5/Adequate=3/Poor=1/No=0		
	Documents applications used at the lowest level	5		Good=5/Adequate=3/Poor=1/No=0		
	Provides flexible reports - suitable for management and analysis	5		Good=5/Adequate=3/Poor=1/No=0		
	IDEF0 supported	5		Good=5/Adequate=3/Poor=1/No=0		
	Links to other business models	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**10**				
	Location Models					
	Documents the logical locations of business operations	5		Good=5/Adequate=3/Poor=1/No=0		
	Links to other business models	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**7**				
8. Workflow Modeling	**Workflow Specification**					
	Models Base Processes	5		Good=5/Adequate=3/Poor=1/No=0		
	Models Process Steps (data entry, decision points, report)	5		Good=5/Adequate=3/Poor=1/No=0		
	Models Process Flows (data, material, temporal)	5		Good=5/Adequate=3/Poor=1/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Models Process Stores (data, material)	5		Good=5/Adequate=3/Poor=1/No=0		
	Models Process Events (triggers, outcomes)	5		Good=5/Adequate=3/Poor=1/No=0		
	Associates organizational units with process steps and stores	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**9**				
	Simulation					
	Arrival Rate Distributions	5		4 or more (e.g. normal, trinomial, exponential, time-phased)=5/2-3=3/ 1 = 1/No=0		
	Resource utilization statistics	5		Yes=5/No=0		
	Queue/Bottle neck analysis	5		Good=5/Adequate=3/Poor=1/No=0		
	Concurrent processes modeling and control	3		Yes=5/No=0		
	Animation	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**9**				
ENGINEERING						
9. Planning	**High-Level requirements**					
	Capture high-level enterprise model	3		Yes=5/No=0		
	Capture high-level requirements	5		Yes=5/No=0		
	Score	**6**				
	Repository support – Basic					
	Compliant with PCTE standard	3		Yes=5/No=0		
	Underlying file structure based on a commercial DBMS	5		DB2 or Oracle=5/Ingres, Informix, Sybase, or MS SQLServer=3/Other DBMS=1/File based=0		
	Standard reporting of repository components and relationships	5		Yes=5/No=0		
	Reporting for Project Management & Tracking	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for large models [> 1 million repository objects]	5		Yes=5/No=0		
	Support large number of concurrent users [>50]	5		Yes=5/No=0		
	Note: refer to Software Configuration Management section below for additional repository management related criteria.	0				
	Score	**10**				

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Repository support – Additional					
	Extensibility of repository	3		Yes=5/No=0		
	Customizable reporting of repository	3		Yes=5/No=0		
	Geographic distribution of the repository supported	3		Yes=5/No=0		
	Score	**9**				
	Estimation					
	Captures standard estimation parameters for the cost, duration, resource requirements for project Deliverables	3		Yes=5/No=0		
	Assists in estimating project cost, schedule, and resource requirements, including ""what-if"" analysis for alternative resource scenarios	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**5**				
	System/Network Simulation					
	Graphical Interface	5		Good=5/Adequate=3/Poor=1/No=0		
	Pre-defined hardware/network model components	5		Good=5/Adequate=3/Poor=1/No=0		
	Ability to model applications	5		Good=5/Adequate=3/Poor=1/No=0		
	General purpose discrete event simulator	5		Yes=5/No=0		
	Statistical and queuing functions	5		Good=5/Adequate=3/Poor=1/No=0		
	What-if analysis	5		Good=5/Adequate=3/Poor=1/No=0		
	Statistics export facility	3		Yes=5/No=0		
	Animation	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**7**				
10. Analysis	**Data/Object Modeling**					
	Supports Information Engineering ERD models	5		Good=5/Adequate=3/Poor=1		
	Supports UML	5		Good=5/Adequate=3/Poor=1		
	Supports Rumbaugh/OMT, Shlaer/Mellor, Jackson Use Case Analysis or Booch OO methods	3		All=5/2-3=3/1=1/None=0		
	Common meta-model allowing support of multiple modeling techniques	5		Good=5/Adequate=3/Poor=1/No=0		
	IDEF1X supported	5		Good=5/Adequate=3/Poor=1/No=0		
	Supports additional ERD methods	0		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Supports additional OO methods	1		Yes=5/No=0		
	Consistency checking	5		Full real-time checking=5/ Full on-request checking=3/ Partial=1		
	Maintains foreign key integrity across relationships, following updates to the model	5		Yes=5/No=0		
	Supports leveled architecture to manage size and complexity of large models	5		Good=5/Adequate=3/Poor=1		
	Score	**9**				
	Process Modeling					
	Supports the creation of Data Flow Diagrams	5		Good=5/Adequate=3/Poor=1/No=0		
	Consistency checking	5		Full real-time checking=5/ Full on-request checking=3/ Partial=1/ None=0		
	Automatic balancing across levels	3		Yes=5/No=0		
	Supports the creation of structure charts	1		Yes=5/No=0		
	Traceability between Process Model and Data Model	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**7**				
	Event Modeling					
	Supports Event Trace/Scenario Modeling	5		Good=5/Adequate=3/Poor=1/No=0		
	Supports State Transition Diagram Modeling	5		Good=5/Adequate=3/Poor=1/No=0		
	Traceability between Event model and Object Model	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Model Management					
	Ability to compare models within one repository	3		Yes=5/No=0		
	Merge models within one repository	3		Yes=5/No=0		
	Merge models across versions and baselines	1		Yes=5/No=0		
	Supports Import/Export of models through a published API	5		Yes=5/No=0		
	Handles collisions on Import/Merge	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Requirements Gathering					

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Use Case Analysis	5		Good=5/Adequate=3/Poor=1/No=0		
	Provides traceability between Use Case definitions and the application system model.	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Reverse Engineering					
	Accept COBOL source code for repository population/model generation	5		Yes=5/No=0		
	Ability to redeploy reverse engineered data and processes into new targets	5		Yes=5/No=0		
	Multiple partitioning parsers (e.g. GUI/screen handling, data access, business logic)	3		Good=5/Adequate=3/Poor=1/No=0		
	Support for Oracle Release 7 or 8	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for DB2	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for MS SQL/Server	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for other DBMS	3		Good=5/Adequate=3/Poor=1/No=0		
	Automated data element reconciliation (synonyms, homonyms, aliases)	3		Good=5/Adequate=3/Poor=1/No=0		
	Support for change impact analysis	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
11. Design	**Physical Data Definition**					
	Automatic denormalization assistance in developing a physical model of the system from a logical specification	3		Good=5/Adequate=3/Poor=1/No=0		
	Maintains bi-directional mapping of logical to physical model	5		Good=5/Adequate=3/Poor=1/No=0		
	Supports Oracle Schema DDL generation	5		Yes=5/No=0		
	Supports Sybase Schema DDL generation	1		Yes=5/No=0		
	Supports MS SQL Server Schema DDL generation	5		Yes=5/No=0		
	Supports DB2 Schema DDL generation	5		Yes=5/No=0		
	Supports Informix Schema DDL generation	1		Yes=5/No=0		
	Supports Ingres Schema DDL generation	1		Yes=5/No=0		
	Supports ANSI SQL-92 Schema DDL generation in addition to vendor specific options	1		Yes=5/No=0		
	Supports multiple RDBMS schema generation from a single logical specification	3		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Ability to specify and generate foreign keys and indexes	5		Good=5/Adequate=3/Poor=1/No=0		
	Ability to specify and generate referential integrity rules	5		Good=5/Adequate=3/Poor=1/No=0		
	Ability to specify and generate stored procedures and triggers	3		Good=5/Adequate=3/Poor=1/No=0		
	Able to capture storage specifications including storage required per instance, number of rows per table, and DASD usage requirements	3		Yes=5/No=0		
	Score	**9**				
	Application Specifications					
	Supports the ability to specify application pseudo-code directly within the toolset.	5		Good=5/Adequate=3/Poor=1/No=0		
	Able to develop a capacity plan for the system including transaction throughput volumes, CPU usage estimates, and network considerations.	3		Yes=5/No=0		
	Score	**7**				
	Prototyping					
	Supports modeling screen flows and prototyping of character-based interfaces	1		Includes I/O and navigation flow=5/Flow=3/Painting tool only=1/No=0		
	Supports modeling window flows and prototyping of GUI-based interfaces	5		Includes I/O and navigation flow=5/Flow=3/Painting tool only=1/No=0		
	Support for RAD techniques using inference to generate application logic from business models	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**6**				
DEVELOPMENT						
12. Reuse	**Search Mechanism for Reuse**					
	Graphical browser	5		Yes=5/No=0		
	Allows searching of the existing classes	5		Yes=5/No=0		
	Allows adding to/building the class hieracrchy	5		Yes=5/No=0		
	Extent of the object class viewing features: Whole Tree; Super-Sub; Single)	3		Whole Tree=5/ Super-Sub=3/ Single=1		
	Score	**8**				

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Supplied reusable libraries					
	GUI	5		Yes=5/No=0		
	Database access	5		Yes=5/No=0		
	Communication	5		Yes=5/No=0		
	Score	**8**				
	Extensibility of supplied reusable libraries					
	Ability to extend the graphical library	3		Yes=5/No=0		
	Ability to extend the non-graphical library	3		Yes=5/No=0		
	Ability to extend the graphical library with Inheritance	5		Yes=5/No=0		
	Ability to extend the non-graphical library with Inheritance	5		Yes=5/No=0		
	Type of Reuse allowed with the extensions (Versioned Inheritance, Auto Inheritance, Templates)	5		Versioned=5/Auto=3/Templates=1/None=0		
	Score	**10**				
	Third Party Extensions					
	Application frameworks available for tool	1		Yes=5/No=0		
	Industry specific libraries available	1		Yes=5/No=0		
	Score	**6**				
13. Construction	**Object Oriented Characteristics (supported in the development environment)**					
	Supports encapsulation	5		Yes=5/No=0		
	Supports inheritance	5		Yes=5/No=0		
	Supports polymorphism (run-time)	3		Yes=5/No=0		
	Score	**9**				
	Debugger support					
	Works in a graphical manner	3		Yes=5/No=0		
	Fully functional (set break points, watch and change variables)	3		Good=5/Adequate=3/Poor=1/No=0		
	Ability to step back, change code in debugger and continue execution	3		Good=5/Adequate=3/Poor=1/No=0		
	Integration with development tool	3		Yes=5/No=0		
	Allows tracing of supplied libraries	3		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Can support client-server application debugging	5		>2-Tier=5/2-Tier = 3/No=0		
	Score	**8**				
	Application Generation					
	Can generate Object Oriented Code (e.g. C++, Smalltalk)	5		Full=5/Skeletal=3/No=0		
	Can generate COBOL Code	5		Full=5/Structures=3/No=0		
	Can generate C Code	5		Full=5/Structures=3/No=0		
	Can generate other 3GL Code (e.g. Fortran, PL1, etc.)	3		Full=5/Partial=3/No=0		
	Supports VPE languages (e.g. Forte, PowerBuilder, Visual Basic)	5		Good=5/Adequate=3/Poor=1/No=0		
	Can generate web-based functions (e.g. HTML, JAVA, etc.)	5		Good=5/Adequate=3/Poor=1/No=0		
	Can generate Batch, or Stand-alone functions	3		Yes=5/No=0		
	Can generate On-line transaction processing functions	3		Yes=5/No=0		
	Performance of generated applications (Startup time, footprint, response time, etc.)	5		Good=5/Adequate=3/Poor=1		
	Reliability of generated applications	5		Good=5/Adequate=3/Poor=1		
	Scalability of applications (peak volumes, peak concurrent users)	5		Good=5/Adequate=3/Poor=1		
	Generated code automatically documented and protected	3		Documented <u>and</u> protected=5/ Documented <u>or</u> protected=3/No=0		
	Generated code traceable to Design components	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Generation capabilities (DBMS specific)					
	Generation of ANSI SQL-92 compliant SQL	5		Yes=5/No=0		
	Generation of DCE/CORBA compliant IDL	5		Yes=5/No=0		
	Support generation of stored procedures	3		Yes=5/No=0		
	Score	**7**				
	GUI Builder					
	Supports the standard GUI controls [push button, radio button, check box, text box, list box]	5		Yes=5/No=0		
	Supports advanced GUI controls [spin box, combo box, multi-column list box, formatted text field]	5		Yes=5/No=0		
	Provides the ""native"" look and feel of the GUI	5		Good=5/Adequate=3/Poor=1/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Provides field and screen level help facilities [see General Services section]	3		Good=5/Adequate=3/Poor=1/No=0		
	Provides customized message design	5		Good=5/Adequate=3/Poor=1/No=0		
	Supports highest common denominator of widget sets across platforms	3		Yes=5/No=0		
	Puts custom controls/widgets into toolbox	5		Yes=5/No=0		
	Score	**9**				
	Metrics					
	Capture of actual resources, times, and tasks.	3		Yes=5/No=0		
	Capture of function point metrics.	3		Yes=5/No=0		
	Capture of KLOC, or other standard metric	1		Yes=5/No=0		
	Allow comparison of actual vs. estimates	3		Yes=5/No=0		
	Export facility for metrics information	3		Yes=5/No=0		
	Reporting facility for metrics information	1		Yes=5/No=0		
	Score	**5**				
14. Integration	**Team Development Support**					
	Seamless support for multiple developers (LAN environ.)	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for multiple teams using distributed repository (i.e. Geographic Distribution)	3		Good=5/Adequate=3/Poor=1/No=0		
	Allows separate applications/projects developed in tool to be merged together into one application/tool	5		Yes=5/No=0		
	Type of locking (realtime vs. checkout)	5		Real-time=5/Check-out=3/None=0		
	Level of the locking mechanism (Low enough?)	5		Object=5/ Business Object=3/ Project=1/ None=0		
	Score	**10**				
	Import/Export					
	Support import/export from other tools	5		Yes=5/No=0		
	Support CDIF standard for import/export	3		Yes=5/No=0		
	Seamless interface between upper and lower CASE tools	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**7**				

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Automated Testing					
	Automated regression testing product	5		Yes=5/No=0		
	Automated performance testing support	5		Yes=5/No=0		
	Provide management of test cases/scripts	5		Good=5/Adequate=3/Poor=1/No=0		
	Trace test case completion to original requirements	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Software Configuration Management - within a single release					
	Seamless interface to SCM system	5		Good=5/Adequate=3/Poor=1/No=0		
	Access control at User ID level	5		Yes=5/No=0		
	Support for granting access to groups of users	3		Yes=5/No=0		
	Ability to control changes to individual components (through access control/security)	5		Yes=5/No=0		
	Allows the creation and controlling of component groupings for maintenance	3		Yes=5/No=0		
	Impact analysis of proposed modifications	5		Good=5/Adequate=3/Poor=1/No=0		
	Ability to track reported problems/bugs	5		Good=5/Adequate=3/Poor=1/No=0		
	Audit capability provided for individual components	5		Good=5/Adequate=3/Poor=1/No=0		
	Allow multiple versions of a component	5		Yes=5/No=0		
	Support comparison across multiple versions	3		Yes=5/No=0		
	Migration support for entire release through Development	5		Good=5/Adequate=3/Poor=1/No=0		
	Migration of individual components through Development phases	5		Yes=5/No=0		
	Migration of grouping through Development phases	3		Yes=5/No=0		
	Quality of Configuration Management Reporting	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**9**				
OPERATIONS						
15. General Services	**Documentation**					
	Provide creation of online help for the Application	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for Cross-platform help	3		Good=5/Adequate=3/Poor=1/No=0		
	Capture of documentation created for developer user (includes OLE/API or equivelant interface, also comments to source, annotations to diagram objects, etc.)	3		Good(dynamic updates)=5 /Adequate(static updates)=3 /Poor(comments only)=1		
	Supports import/export of help documentation to word processor	3		Yes=5/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Score	**6**				
	Query and reporting					
	Query and reporting tool for user provided	5		Good=5/Adequate=3/Poor=1/No=0		
	Support for Summary and Drill-down reporting	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**9**				
	Performance monitoring					
	Load balancing of application servers (Scalability)	5		Yes=5/No=0		
	Load balancing activated by rules outside of application code	3		Yes=5/No=0		
	Can rules react to alerts from performance monitors?	3		Good=5/Adequate=3/Poor=1/No=0		
	Captures performance data for export or reporting	3		Yes=5/No=0		
	Seamless interface to performance monitoring system	5		Good=5/Adequate=3/Poor=1/No=0		
	Score	**8**				
	Business continuity					
	Failover support (software fault tolerance)	5		Yes=5/No=0		
	7x24 Availability provided (Hot reconfiguration/backup)	5		Yes=5/No=0		
	Score	**9**				
	Security					
	Provides Data-level security	5		Yes=5/No=0		
	Provides Field-level security	5		Yes=5/No=0		
	Provides Screen-level security	5		Yes=5/No=0		
	Encryption of messaging provided	5		Yes=5/No=0		
	Access of Application enforced at User ID level	5		Field=5/Process=3/Application=1		
	Allows managing the access by groups of users	5		Field=5/Process=3/Application=1		
	Score	**6**				
16. Software Configuration Management	**Version Control - across multiple release levels**					
	Extract all components for release/version	5		Yes=5/No=0		
	Ability to manage multiple releases	5		Good=5/Adequate=3/Poor=1/No=0		

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Score	**8**				
	Migration					
	Ability to migrate individual components across multiple releases. This includes Production fixes.	5		Good=5/Adequate=3/Poor=1/No=0		
	Support in-flight resolution of migration conflicts during the migration of multiple releases	1		Good=5/Adequate=3/Poor=1/No=0		
	Score	**9**				
	Security - at release level					
	Implements security specific to cross release functions	1		Yes=5/No=0		
	Score	**7**				
17. Software Distribution	**Environment definition**					
	Inventory of execution environment (Installation definition)	5		Good=5/Adequate=3/Poor=1/No=0		
	Tracks install status for recovery purposes	5		Yes=5/No=0		
	Graphical manipulation of execution environment (software and hardware)	3		Yes=5/No=0		
	Score	**7**				
	Automated deployment					
	Automated distribution of application	5		Yes=5/No=0		
	Errors captured during deploy (i.e. disk space)	3		Yes=5/No=0		
	Ability to Rollback of previous version when errors occur	3		Yes=5/No=0		
	Software metering capability of Application	3		Good=5/Adequate=3/Poor=1/No=0		
	Score	**10**				

Category Description	Criteria/Requirements	Question Weight	Product Score	Product Comments	Weighted Score	Category Score
	Notes and Scoring Example					
Weights	0 = Information Only					
	1= Desired					
	3=Highly Desirable					
	5=Critical Importance					
Scores	0=Absent, Not Supported, No					
	1=Present, Marginal support					
	3=Minimally Acceptable					
	5=Meets Requirement, Supported, Yes					
	Scoring Example			Product Score for Criteria	*Question Wt. X*	Sub-Category Weight X Weighted Average
Category Example	Sub-Category 1			Individual Criteria Weights		
	Criteria a	3	5		15	
	Criteria b	5	5		25	
	Criteria c	1	3		3	
	Score	**7**		Weighted Average: Sum (Weighted Scores) / Sum (Criteria Weights)	**4.78**	**33.46**
	Sub-Category 2			Sub-Category Weight		
	Criteria d	3	5		15	
	Criteria e	3	3		9	
	Criteria f	5	3		15	
	Score	**5**			**3.55**	**17.75**

Appendix C – Enterprise Modeling Tools Recommended for Further Investigation

Tool/Tool Suite	Vendor	Remarks
Enterprise Analyst Software through Pictures (StP)	Aonix	With Enterprise Analyst, StP provides a modeling-based development environment that provides significant functionality. StP can support both traditional and O-O environments
BusinessTeam GroundWorks ObjectTeam ProcessTeam TeamWork Terrain	Cayenne Software, Inc.	Taken together, Cayenne's products provide significant functionality, although they do not provide significant code development functionality. They include the OEM version of Proforma's business modeling product.
Dynasty	Dynasty Technologies, Inc.	Dynasty provides significant functionality, although it does not provide significant business modeling functionality. Dynasty is best for client/server applications developed in an object-oriented environment.

Tool/Tool Suite	Vendor	Remarks
Forte Application Environment Forte Conductor Forte Express Forte WebEnterprise	Forte Software, Inc.	Taken together, Forte's products provide significant functionality, although they do not provide significant business modeling functionality. Forte is best for client/server applications developed in an object-oriented environment.
AI∅ ProCap ProjectLink ProSim SmartClass SmartCost SmartER	Knowledge Based Systems, Inc.	Taken together, KBSI's products provide significant functionality, although the only code that is generated is C++.
Designer/2000 Developer/2000	Oracle Corporation	Taken together, Oracle products provide significant functionality, although they do not provide significant business modeling functionality.
Advantage Advisor Advantage Paradigm Plus Advantage Process Continuum BPwin ERwin ModelMart Repository More. . .	Platinum Technology, Inc	Taken together, Platinum's products provide significant functionality, especially considering Platinum's recent acquisition of Logic Works, Inc. (BPwin, ERwin, etc.). Platinum's tools are primarily oriented toward the object-oriented environment.

Tool/Tool Suite	Vendor	Remarks
System Architect 4 SA/BPR Professional SA/Data Architect SA/Object Architect More. . .	Popkin Software & Systems, Inc.	Taken together, Popkin's products provide significant functionality. Popkin's tools are primarily oriented toward the object-oriented environment, although support is provided for structured analysis and design.
ProVision Workbench	Proforma Corporation	ProVision Workbench provides significant functionality, although its code generation is limited.
Enterprise Framework	Ptech Inc.	Enterprise Framework, which integrates Ptech's Business Framework and Technology Framework, provides significant functionality. Its current code generation capabilities are limited to object-oriented languages, but it appears this capability can be extended to other languages.
Select Enterprise	Select Software Tools, Inc	Select Enterprise provides significant functionality, but its business modeling capability appears limited and it is primarily oriented toward the object-oriented environment.
COOL:Biz COOL:Gen COOL:Jex COOL:Spex	Sterling Software	Taken together, Sterling's products provide significant functionality. The tools provide support for object-oriented environments.

Tool/Tool Suite	Vendor	Remarks
Database Engineer EasyCASE Professional EasyER EasyObject Visible Advantage Visible Advisor Visible Analyst Visible Univeral Model	Visible Systems Corporation	Taken together, Visible's products provide significant functionality. The tools provide support for object-oriented environments

Appendix D – Enterprise Modeling Tool Contact Information

Vendor	Tool Name	URL	Contact Information
A.D. Experts	4Keeps	http://adexperts.com/4Keeps.htm	A. D. Experts, Inc. 2500 Packard, Suite 211 Ann Arbor, MI 48104 Voice:734.971.0250 Fax: 734.677.5605 email: sales@adexperts.com
Action Technologies, Inc	Process Builder/Analyst Process Builder/Developer	http://www.actiontech.com/	Action Technologies, Inc. 1301 Marina Village Parkway, Suite 100 Alameda, CA 94501-1028 Voice: 800.WORKFLOW 510.521.6190 Fax: 510.769.0596
ACTL Systems Ltd.	AbyS	http://www.sharat.co.il/actl/welcome.html	ACTL Systems Ltd. Jaffa Street 217/18, POB 8129 91081 Jerusalem, ISRAEL Voice: 972.2.5376459 Fax: 972.2.5370425 email: actl@netvision.net.il
Adaptive Arts Pty Ltd	Simply Objects Analysis & Design Ed. Simply Objects Modeler Edition	http://www.adaptive-arts.com	Adaptive Arts Pty Ltd. 307 Pittwater Road North Ryde, NSW 2113, Australia Voice: 61.2.9878.5095

Vendor	Tool Name	URL	Contact Information
Advanced Software Technologies, Inc.	GDPro	http://www.advancedsw.com	Advanced Software Technologies, Inc. 8955 South Ridgeline Blvd. Suite 1500 Highlands Ranch, CO 80126 Voice: 303.470.8427 Fax: 303.470.8428
Antares Alliance Group	ObjectStar	http://www.aag.com	Antares Alliance Group Overpeck Centre 85 Challenger Road 3rd Floor Ridgefield Park, NJ 07660 Voice: 201.229.4400 Fax: 201.440.2619
Aonix	Enterprise Analyst Software through Pictures/OMT Software through Pictures/Booch Software through Pictures/SE Software through Pictures/IM Software through Pictures/T Software through Pictures/UML	http://www.aonix.com	Aonix World Headquarters 595 Market Street San Francisco, CA 94105 Voice: 415.543.0900 800.97AONIX Fax: 415.543.0145 email:info@aonix
BIS Distributed by QSoft Solutions Corp.	Bis Process Manager	http://www.qsoftguide.com	QSoft Solutions Corp. Voice: 716.264.9700 800.669.9701 Fax: 716.264.9702 email: qsoft@rpa.net

Vendor	Tool Name	URL	Contact Information
CACI Products Company	SIMPROCESS	http://www.caciasl.com	CACI Products Company 1700 North Moore Street Suite 1105 Arlington, VA 22209 Voice: 703.875.2900 Fax: 703.875.9486
CASE*wise* Systems, Inc.	Corporate Modeler	http://www.casewise.com	CASE*wise* Systems, Inc. Reservour place 1601 Trapelo Road Waltham, MA 02154 Voice: 781.895.9900 Fax: 781.895.9914
Cayenne Software Inc.	Business Team GroundWorks ObjectTeam ProcessTeam TeamWork Terrain	http://www.cayennesoft.com	Cayenne Software, Inc. Corporate Headquarters 14 Crosby Drive Bedford, MA 01730 Voice: 800.528.2388 781.280.0505 Fax: 781.280.6000 email: info@cayennesoft.com
CGI, an IBM Company	VisualAge Pacbase	http://www.software.ibm.com/ad/vapacbase	IBM North America 1133 Westchester Avenue White Plains, NY 10604 Voice: 800.IBM 4 YOU 770.863.1234 Fax: 770.863.3030 email: askibm@vnet.ibm.com

Vendor	Tool Name	URL	Contact Information

CINCOM	Process Builder/Analyst
	Process Builder/Developer
	TOTAL FrameWork
	  WorkFlow FrameWork
	  Assembly FrameWork
	  Data Access FrameWork
		http://www.cincom.com/totalframework	Cincom World Headquarters
			Cinncinnati, OH
			Voice: 800.224.6266
			513.612.2300
			513.612.2335
			Fax: 513.612.2000
			email: info@cincom.com

CMD Corporation	Synergy Synergy/Framework	http://www.cmdcorp.com	CMD Corporation 4835 LBJ Freeway, Suite 650 Dallas, TX 75244 Voice: 972.503.0500 Fax: 972.503.8175 email: sales@cmdcorp.com

Dr. Cheng Hsu
  Rensselaer
    Polytechnic Institute
	TSER/IBMS	http://viu.eng.rpi.edu	IBMS Development
			c/o Dr. Cheng Hsu
			Department of Decision Sciences
			and Engineering Systems
			Rensselaer Polytechnical Institute
			Troy, NY 12180-3590
			email: hsuc@rpi.edu

Dynasty Technologies, Inc.	Dynasty	http://www.dynasty.com	Dynasty Technologies, Inc. 101 Redwood Shores Pkwy. Suite 200 Redwood Shores, CA 94065 Voice: 650.631.5430 Fax: 650.631.5889 email: info@dynasty.com

Vendor	Tool Name	URL	Contact Information

Excel Software	QuickCRC
	WinA&D
	  Desktop
	  Developer
	WinTranslator
		http://www.excelsoftware.com	Excel Software
			P. O. Box 1414
			Marshalltown, IA 50158
			Voice: 515.752.5359
			Fax: 515.752.2435
			email: info@excelsoftware.com

Forte Software, Inc.	Forte Application Environment Forte Conductor Forte Express Forte WebEnterprise	http://www.forte.com	Forte Software, Inc. 1800 Harrison Street Oakland, CA 94612 Voice: 510.869.3400 Fax: 510.869.3480
Future Tech Systems, Inc.	Envision 5.0	http://www.future-tech.com	Future Tech Systems, Inc. 824 East Main Street Auburn, WA 98002 Voice: 206.939.7552 Fax: 206.735.6763

Vendor	Tool Name	URL	Contact Information
Halstenbach - Angewandte Computer Technologie GmbH	iss-uml	http://www.objects.de/iss/isshort.htm	Halstenbach ANGEWANDTE COMPUTER TECHNOLOGIE GMBH Breidenbrucher Str. 2 D-51674 Wiehl, Germany Voice: 49.2261.9902.0 Fax: 49.2261.9902.99 email: info@halstenbach.com U.S. Office 827 State Street Santa Barbara, CA 93101 Voice: 805.568.0023 Fax: 805.884.0806 827
Hamilton Technologies, Inc.	001 Tool Suite	http://world.std.com/~hti/intro.html	Hamilton Technologies, Inc. 17 Inman Street Cambridge, MA 02139 Voice: 617.492.0058 Fax: 617.492.1727 email: sales@htius.com
High Performance Systems, Inc.	ithink Analyst ithink Strategy	http://www.hps-inc.com/products/ithink/ithink.html	High Performance Systems, Inc. 45 Lyme Road, Suite 200 Hanover, NH 03755 Voice: 800.332.1202 603.643.0636 Fax: 603.643.9502 email: support@hps-inc.com

Vendor	Tool Name	URL	Contact Information
HoloSofx	Workflow BPR	http://www.holosofx.com	Holosofx, Inc 100 North Sepulveda Blvd. Suite 603 El Segundo, CA 90245 Voice: 310.640.0101 Fax: 310.640.0960
IBM Corporation	Business Process Modeler	http://www.software.hosting.ibm.com/ad/promodel/bmtn0b06.htm	IBM North America 1133 Westchester Avenue White Plains, NY 10604 Voice: 800.IBM 4 YOU 770.863.1234 Fax: 770.863.3030 email: askibm@vnet.ibm.com
	FlowMark	http://www.software.ibm.com/ad/flowmark/exmn0mst.htm	

	VisualAge DataAtlas Multiplatform
	  Modeler
	  Designer
	  Dictionary
		http://www.software.ibm.com/ad/datatlas	

	VisualAge TeamConnection	http://www.software.ibm.com/ad/teamcon	

ICONIX Software
  Engineering, Inc.
	PowerTools
	  QuickChart
	  PowerPDL
	  FreeFlow
	  Language Sensitive Editor
	  DataModeler
	  FastTask
	  PowerTools Multi-User
	    Dictionary
	  ObjectModeler
		http://www.iconixsw.com	ICONIX Software Engineering, Inc.
			2800 28th Street
			Suite 320
			Santa Monica, CA 90405
			Voice: 310.458.0092
			Fax: 310.396.3454
			email: marketing@iconixsw.com

Vendor	Tool Name	URL	Contact Information
IDS Scheer, Inc	ARIS Product Suite	http://www.ids-scheer.com	IDS Scheer, Inc. Brandywine 2 Building Suite 307 Chadds Ford, PA 19317 Voice: 610.558.7600 800.810.ARIS Fax: 610.558.7603 email:info@ids-scheer.com
I-Logix, Inc. Distributed by Meridian Marketing Group	Rhapsody	http://www.ppgsoft.com/ppgsoft/ILOGIX/index.html	Voice: 520.282.6300 Fax: 520.774.0896 email: inquiry@meridian-marketing.com
Imagine That, Inc.	Extend Extend+BPR Extend+Manufacturing	http://www.imaginethatinc.com/extend_details.html	Imagine That, Inc. 6830 Via Del Oro Suite 230 San Jose, CA 95119 Voice: 408.365.0305 Fax: 408.629.1251 email: extend@imaginethatinc.com
INTEC Systems, Inc.	is/MODELER	http://www.intecsys.com/facts.html	INTEC Systems, Inc. 1800 S. Australian Ave. Suite 100 West Palm Beach, FL 33409 Voice: 561.640.8383 800.INTEC-WH Fax: 561.640.6065

Vendor	Tool Name	URL	Contact Information
Integrated Systems, Inc.	BetterState	http://www.isi.com/Products/BetterState/oview.html	Integrated Systems, Inc. Headquarters 201 Moffett Park Drive Sunnyvale, CA 94089 Voice: 800.770.3338 Fax: 408.542.1950
INTELLICORP, Inc.	Kappa-PC	http://www.intellicorp.com/kappa-pc	IntelliCorp, Inc. 1975 El Camino Real West Mountain View, CA 94040-2216 Voice: 888.MODEL R3 650.965.5500 Fax: 650.965.5647 email: sales-info@intellicorp.com
	LiveAnalyst	http://www.intellicorp.com/sap/LiveAnalyst_web-Technica.html	
	LiveModel	http://www.intellicorp.com/sap/platform4developers.html	
	PowerModel	http://www.intellicorp.com/ powermodel.html	
Interfacing Technologies Corporation	FirstSTEP Charter FirstSTEP Designer FirstSTEP Viewer	http://www.interfacing.com/step/main.htm	Interfacing Technologies Coporation 7575 Trans Canada Highway Suite 610 Saint-Laurent (Montreal), Quebec, Canada H4T 1V6 Voice: 514.856.9097 Fax: 514.856.3377 email: FirstSTEP@interfacing.com

Vendor	Tool Name	URL	Contact Information
INTERSOLV, Inc.	AppMaster Builder	http://www.intersolv.com/appmaster/builder/factsheet_es.html	INTERSOLV, Inc. Corporate Headquarters 9420 Key West Avenue Rockville, MD 20850 Voice: 800.547.4000 301.838.5000 Fax: 301.838.5064 email: info@intersolv.com
	AppMaster Renovator	http://www.intersolv.com/appmaster/renovator/factsheet_renovator.html	

Invictus
  Distributed by Qsoft
    Solutions Corp.
	ProMap	http://www.qsoftguide.com	QSoft Solutions Corp.
			Voice: 716.264.9700
			800.669.9701
			Fax: 716.264.9702
			email: qsoft@rpa.net

IvyTeam	StructWare	Http://www.ivyteam.com/e/structware/proze.htm	IvyTeam P. O. Box Alpenstrasse 9 CH-6304 Zug Voice: +41 41 710 80 20 Fax: +41 41 710 80 60 email: ivyteam@access.ch
Kennedy Carter	Architecture Toolkit Intelligent Simulator (I-SIM) I-OOA Target Architecture (TA-1)	http://www.kc.com/html/products/products.html	email:enquiries@kc.com

Vendor	Tool Name	URL	Contact Information
Knowledge Based Systems, Inc.	AI∅ Win ProCap ProjectLink ProSim SmartClass SmartCost SmartER	http://www.kbsi.com/products/ products.html	Knowledge Based Systems, Inc. One KBSI Place 1500 University Drive East College Station, TX 77840 Voice: 409.260.5274 409.260.1965 email: products@kbsi.com
Lincoln Software Ltd.	Engineer ToolBuilder	http://www.ipsys.com/products.htm	Lincoln Software Limited Marlborough Court Pickford Street Macclesfield Cheshire, SK11 6JD United Kingdom Voice: 44.0.1625.616.722 Fax: 44.0.1625.616.780 email: info@lincolnsoftware.com
M.L.L. Software and Computers Industries Ltd. Distributed by Meridian Marketing Group	WIZDOM-Pro	http://www.ppgsoft.com/ppgsoft/ wz_main.html	Meridian Marketing Group Voice: 520.282.6300 Fax: 520.774.0896 email: moonglow@primenet.com

Vendor	Tool Name	URL	Contact Information
Meta Software	Business Model Repository	http://www.metasoftware.com/ prodbmr.html	Meta Software 125 Cambridge Park Drive Cambridge, MA 02140 Voice: 617.576.6920 Fax: 617.661.2008 email: webmaster@metasoft.com

	WorkFlow Analyzer
	    WorkFlow Modeler
	    WorkFlow Simulator
		http://www.metasoftware.com/ prodwfa.html	

MetaCase Consulting
    Distributed by
        Meridian Marketing
    Group
	MetaEdit+ Method Workbench
	MetaEdit+
	    MetaEdit Personal 1.2
		http://www.ppgsoft.com/ppgsoft/ me_1.html
		http://www.jsp.fi/metacase
			Meridian
			Marketing Group
			Voice: 520.282.6300
			Fax: 520.774.0896
			email: moonglow@primenet.com
			
			MetaCase Consulting
			Ylistonmaentie 31
			FIN-40500 Jyvaskyla
			Finland
			Voice: 358.14.4451.400
			        358.400.648606
			Fax: 358.14.4451.405

Microgold Software, Inc.	CRC Pro *WithClass 98*	www.microgold.com	Microgold Software Inc. 283 Lilac lane Freehold, NJ 07728 Voice: 732.683.1606 Fax: 732.683.1065 email: info@microgold.com

Vendor	Tool Name	URL	Contact Information
Micrografx, Inc.	Optima!	http://www.advanedge.com/optima/prodinfo.asp	Micrografx, Inc. 1303 East Arapaho Road Richardson, TX 75081 Voice: 800.733.3729 Fax: 716.873.0906
Microsoft Corporation	Microsoft Repository Visual Modeler	http://www.microsoft.com	Microsoft Corporation Corporate Headquarters One Microsoft Way Redmond, WA 98052-6399 Voice: 425.882.8080
microTOOL GmbH	case/4/0	http://www.microtool.de/case.e/ca_430e_main.htm	microTOOL GmbH Voltastr. 5 D-13355 Berlin, Germany Voice: (+49 30) 467 086-0 Fax: (+49 30) 464 4714 email: info@microTOOL.de
microTOOL GmbH Distributed by Meridian Marketing Group	*objectiF*	http://www.ppgsoft.com/ppgsoft/ob_asst.html	Meridian Marketing Group Voice: 520.282.6300 Fax: 520.774.0896 email: moonglow@primenet.com

Vendor	Tool Name	URL	Contact Information

NCR/METIS Solutions	METIS 97 BASE
	  Advanced Process Modeling
	  Relationship Matrix
	  Development Kit
	ASCII File Interface
		http://www.metis.no	NCR Norge AS
			METIS Solutions
			Eiken Industripark
			Post Office Box 1085
			N-3194 HORTEN
			Norway
			Voice: 47.33.03.57.00
			Fax: 47.33.03.57.01
			email: info@metis.no
			
			Jeff Whiting
			Voice: 801.655-0888
			email: Jeff.Whiting@LosAngelsCA.
			NCR.com

Netron, Inc.	Netron Catalyst	http://www.netron.com/products/ catalyst.htm	Netron, Inc. 6111 Peachtree Dunwoody Rd. Building A, Suite 201 Atlanta, GA 30328 Voice: 770.804.8040 888.Netron0 Fax: 770.804.0888 email: marketing@netron.com
	Netron Connectivity Frameworks	http://www.netron.com/products/ connect.htm	
	Netron Fusion	http://www.netron.com/products/ fusion.htm	
	Netron Renovator	http://www.netron.com/products/ renovatr.htm	

Vendor	Tool Name	URL	Contact Information
Object Domain Systems, Inc.	Object Domain 2.0	http://www.objectdomain.com/domain2_description.html	Object Domain Systems, Inc. 200 Laver Drive Cary, NC 27511 Voice: 919.461.4904 Fax: 919.461.0053 email: info@objectdomain.com
Object International Software	Together/Professional	http://www.oisoft.com/Together2/Introduction.htm	Object International Software Schulze-Delitzsch-Str. 16 D-70565 Stuttgart, Germany Voice: 49.0.711.78.71.0.0 Fax: 49.0.711.78.71.0.17
Oracle Corporation	Designer/2000	http://ntsolutions.oracle.com/products/des/html/desdata.htm	Oracle Corporation 500 Oracle Parkway Redwood Shores, CA 94065 Voice: 415.506.7000 Fax: 415.506.7200
Passport Corporation	IntRprise	http://www.passportcorp.com/products/wp_enablement_c.html	Passport Corporation Mack Centre III 140 East Ridgewood Ave. Paramus, NJ 07652 Voice: 201.634.1100

Vendor	Tool Name	URL	Contact Information
Platinum Technology, Inc.	ADvantage ADvisor	http://www.platinum.com/products/ appdev/advis_ps.htm	Platinum Technology, Inc. 1815 South Meyers Road Oakbrook Terrace, IL 60181-5241 Voice: 630.620.5000 800.442.6861 Fax: 630.691.0718 email: info@platinum.com
	ADvantage AionDS	http://www.platinum.com/products/ appdev/aion_ps.htm	
	ADvantage CCC/Harvest	http://www.platinum.com/products/ appdev/ccharps.htm	
	ADvantage Paradigm Plus	http://www.platinum.com/products/ appdev/pplus_ps.htm	
	ADvantage Process Continuum	http://www.platinum.com/products/ appdev/ppcpr.htm	
	BPwin	http://www.platinum.com/products/ appdev/bpwin_ps.htm	
	ERwin	http://www.platinum.com/products/ appdev/erwin_ps.htm	
	ModelMart	http://www.platinum.com/products/ appdev/modelmps.htm	
	OR-Compass	http://www.platinum.com/products/ appdev/orcompass.htm	
	Repository	http://www.platinum.com/products/ appdev/repos_ps.htm	
	TESTBytes	http://www.platinum.com/products/ appdev/testb_ps.htm	

Vendor	Tool Name	URL	Contact Information
Popkin Software & Systems, Inc	SA/BPR & BPR Professional SA/CRC Cards 98 SA/Data Architect SA/Dynasty Link SA/Magic Link SA/Object Architect System Architect Web Publishing Utility	http://www.popkin.com/prods/product.htm	Popkin Software & Systems 11 Park Place New York, NY 10007-2801 Voice: 212.571.3434 Fax: 212.571.3436 Popkin Software & Systems Federal Systems Division 12251 I Street, NW, Suite 500 Washington, DC 20005 Voice: 202.218.3530 Fax: 202.682.4707

Proforma Corporation	ProVision Workbench
	  Enterprise Edition
	  Business Edition
		http://www.proformacorp.com	Proforma Corporation
			17515 West Nine Mile Road
			Suite 1170
			Southfield, Michigan 48075
			Voice: 248.443.0055
			Fax: 248.443.0506
			email: proformacorp@
			proformacorp.com

Project Technology, Inc.	BridgePoint Application Development Tool Suite	http://www.projtech.com/prods/ bpinfo.html	Project Technology, Inc. 10940 Bigge Street San Leandro, CA 94577 Voice: 510.567.0255 Fax: 510.567.0250

Vendor	Tool Name	URL	Contact Information
Ptech, Inc.	Business FrameWork Enterprise FrameWork Professional Enterprise Framework Technology Framework	http://www.ptechinc.com	Ptech, Inc. 160 Federal Street, 13th Floor Boston, MA 02110 Voice: 617.443.1170 Fax: 617.443.1136 Jeff Goins: 804.777.9075 email: goins@ptechinc.com
Quality Systems & Software, Ltd.	DOORS	http://www.qssinc.com	Quality Systems & Software, Ltd. Magdalen Centre, Oxford Science Park Oxford, Oxon, OX4 4GA United Kingdom Voice: 01865.784285 Fax: 01865.784286 email: 100111.2230@ compuserve.com

Rapid Prototyping
  Laboratory
  Sunderland University
	LOCANA	http://osiris.sunderland.ac.uk/research/
		canopus/mitchell/rpl.html	

Rational Software
  Corporation
	Rational Rose	http://www.rational.com/products/rose/
		prodinfo.html
			Rational Software Corporation
			Corporate Headquarters
			18880 Homestead Road
			Cupertino, CA 95014
			Voice: 800.728.1212
			  408.863.9900
			Fax: 408.863.4120
			email: info@rational.com

Vendor	Tool Name	URL	Contact Information
Riverton Software	HOW	http://www.riverton.com/product/welcome.htm	Riverton Software Corporation One Kendall Square. Building 200 Cambridge, MA 02139 Voice: 617.588.0500
Sapiens	Object Pool Object Modeler	http://www.sapiens.com/prodinfo.html	Sapiens Executive Offices Yitzhak Rabin Science Park P. O. Box 2211 76120 Rehovot, Israel Voice: +972.8.938.2777 Fax: +972.8.938.2930 email: info@sapiens.com
Scientific and Engineering Software, Inc.	SES/objectbench SES/strategizer SES/workbench	Http://www.ses.com	Scientific and Engineering Software, Inc. 4301 Westbank Drive, Building A Austin, TX 78746-6564 Voice: 800.759.6333 512.328.5544 Fax: 512.327.6646 email: info@ses.com

Vendor	Tool Name	URL	Contact Information
Scitor Corporation	Process Charter Process 98	Http://www.qsoftguide.com http://www.scitor.com/pc/pcsum.htm	QSoft Solutions Corp. Voice: 716.264.9700 800.669.9701 Fax: 716.264.9702 email: qsoft@rpa.net Scitor Corporation 333 Middlefield Road, Fl. 2 Menlo Park, CA 94025 Voice: 650.462.4200 800.549.9876 Fax: 650.462.4201 email: pcsales@scitor.com
Select Software Tools, Inc.	Select Enterprise	http://www.select-software.com	Select Software Tools, Inc. 1524 Brookhollow Drive Santa Ana, CA 92705 Voice: 714.825.1050 Fax: 714.825.1090 email: julie@selectus.mhs. compuserve.com
Silverrun Technologies, Inc.	Silverrun	http://rs6000.silverrun.com/Products/sre.html	Silverrun Technologies, Inc. 300 Tice Boulevard Woodcliff Lake, NJ 07675 Voice: 800.537.4262 201.391.6500 Fax: 201.391.2210

Vendor	Tool Name	URL	Contact Information
Software Emancipation Technology, Inc.	DISCOVER	http://www.setech.com/products/description.html	Software Emancipation Technology, Inc. Coporate Headquarters 15 Third Avenue Burlington, MA 01803 Voice: 888.9DISCOVER 781.359.3300 Fax: 781.359.3399
Staffware Corporation	Staffware 97	http://www.staffware.com/home/products/97overview.htm	Staffware Corporation 19 Crosby Drive. Suite 130 Bedford, MA 01730 Voice: 781.271.0003 Fax: 781.271.0066 email: jbarry@staffware.com
Sterling Software	COOL:Biz COOL:Enterprise COOL:Gen COOL:Jex COOL:Spex COOL:Xtras (Advise & Webview)	http://www.sterling.com/products/cool.htm	Sterling Software Coporate Headquarters 300 Crescent Court, Suite 1200 Dallas, TX 75201 Voice: 800.338.430 214.981.1000 Fax: 214.981.1255 email:COOL@sterling.com

Vendor	Tool Name	URL	Contact Information
Structured Software Systems Ltd.	Cradle	http://www.3sl.co.uk/sssl/whatis.htm	Structure Software Systems Ltd. 329-331 London Road Camberley,Surrey GU15 3HQ United Kingdom Voice: 44.0.1276.61925 Fax: 44.0.1276.686639 email: sales@3sl.co.uk
Structured Technology Group, Inc.	AxiomDsn	http://www.stgcase.com/casetools/axiomdsn.html	Structured Technology Group, Inc. 28157 Shelter Cove Drive Saugus, CA 91350 Voice: 800.959.2451 805.296.3607 Fax: 805.296.5302 email:info@stgcase.com
	AxiomSys	http://www.stgcase.com/casetools/axiomsys.html	
Sybase, Inc.	PowerDesigner MetaWorks 6.1 PowerDesigner Viewer 6.1 PowerDesigner WarehouseArchitect 6.1 PowerDesigner AppModeler 6.1 PowerDesigner DataArchitect 6.1 PowerDesigner ProcessAnalyst 6.1	http://www.sybase.com/products/powerdesigner/sd_info.html	Sybase, Inc. Corporate Headquarters 6475 Christe Avenue Emeeryville, CA 94608-1050 Voice: 800-8-SYBASE 510.922.3555
Sysoft SA	Amarco Tool System	http://www.ionino.com/amarco-e/ index.html	Sysoft SA 116, ave. des Champs Elysees 75008 Paris, France Voice: +33(0) 1 47 20 65 34 Fax: +33(0) 1 47 23 44 52 email: amarco@ionino.com

Vendor	Tool Name	URL	Contact Information
Tendril Software, Inc.	StructureBuilder	http://www.tendril.com/content/ sbhome.htm	Tendril Software, Inc. 319 Littleton Road, #105 Westford, MA 01886 Voice: 978.392.9600
Unify Corporation	VISION	http://www.unify.com/Product/ vis-over.html	Unify Corporation 181 Metro Drive, 3rd Floor San Jose, CA 95110 Voice:408.467.4500 Fax: 408.467.44511
Ventana Systems, Inc	Vensim Standard/Professional	http://www.vensim.com	Ventana Systems, Inc. 60 Jacob Gates Road Harvard, MA 01451 Voice: 617.489.5249 Fax: 617.489.5316 email: vensim@vensim.com
Visible Systems Corporation	Database Engineer EasyCASE Professional EasyER EasyObject Visible Advantage Visible Advisor Visible Analyst Visible Universal Model	http://www.visible.com	Visible Systems Corporation 300 Bear Hill Road Waltham, MA 02154 Voice: 800.6VISIBLE 781.890.2273 Fax: 781.890.8909 email: sales@visible.com